

Message Text

UNCLASSIFIED

PAGE 01 TOKYO 04175 151000Z
ACTION OES-07

INFO OCT-01 EA-12 ISO-00 INR-10 NSF-02 NAS-01 CIAE-00
NSAE-00 MCE-00 SP-02 /035 W
-----116230 151855Z /41
R 150929Z MAR 78
FM AMEMBASSY TOKYO
TO SECSTATE WASHDC 6145

UNCLAS TOKYO 04175

FOR OES/APT/SA

FOR INR/OIL

E.O. 11652: N/A
TAGS: TECH, EQUIP, JA
SUBJECT: ELECTRON BEAM LITHOGRAPHY FOR VLSI'S

1. THE SUPER LSI TECHNICAL RESEARCH ASSOCIATION HAS
ANNOUNCED THAT ITS JOINT RESEARCH LAB HAS SUCCEEDED IN
DEVELOPING A HIGH-PERFORMANCE ELECTRON BEAM LITHOGRAPHIC
DEVICE CAPABLE OF DRAWING PATTERNS WITH LINE BREADTH OF
UP TO ONE MICROMETER.

2. USING QTE RASTER SCANNING METHOD UNQTE DEVELOPED BY
BELL LABS, DEVICE CAN PRODUCE HIGH-RESOLUTION MICROSCOPIC
PATTERNS AT HIGH SPEED DUE TO GREATER ELECTRON BEAM
CURRENTS. NEW PATTERN DATA PROCESSING METHOD MAKES IT
POSSIBLE TO DRAW PATTERNS WITH LINE BREADTH OF ONE MICRO-
METER IN ABOUT 180 MINUTES, PATTERNS WITH LINE BREADTH OF
TWO MICROMETERS IN ABOUT 50 MINUTES AND PATTERNS WITH LINE
BREADTH OF FOUR MICROMETERS IN LESS THAN 30 MINUTES. LONG
LIFE OF ELECTRON BEAM SOURCE--MORE THAN 2,500 HRS--HAS
DISPENSED WITH NEED FOR CALIBRATION OR REGISTRATION WHILE
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PATTERNS ARE BEING DRAWN.

3. DEVELOPMENT OF DEVICE IS REGARDED AS MARKING A
SIGNIFICANT STEP TOWARD ACHIEVING OBJECTIVE FOR WHICH
SUPER LSI TECHNICAL ASSOCIATION WAS ESTABLISHED IN APRIL
1976: DEVELOPING SUPER LSI'S WHEREBY A MILLION TRAN-
SISTORS ARE LOADED ON A FOUR MILLIMETER SQUARE SILICON

PLATE. SHERMAN

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NNN

Message Attributes

Automatic Decaptioning: X
Capture Date: 01 jan 1994
Channel Indicators: n/a
Current Classification: UNCLASSIFIED
Concepts: LASERS
Control Number: n/a
Copy: SINGLE
Draft Date: 15 mar 1978
Decaption Date: 01 jan 1960
Decaption Note:
Disposition Action: n/a
Disposition Approved on Date:
Disposition Case Number: n/a
Disposition Comment:
Disposition Date: 01 jan 1960
Disposition Event:
Disposition History: n/a
Disposition Reason:
Disposition Remarks:
Document Number: 1978TOKYO04175
Document Source: CORE
Document Unique ID: 00
Drafter: n/a
Enclosure: n/a
Executive Order: N/A
Errors: N/A
Expiration:
Film Number: D780115-0754
Format: TEL
From: TOKYO
Handling Restrictions: n/a
Image Path:
ISecure: 1
Legacy Key: link1978/newtext/t19780363/aaaacbob.tel
Line Count: 63
Litigation Code IDs:
Litigation Codes:
Litigation History:
Locator: TEXT ON-LINE, ON MICROFILM
Message ID: 9c374bc6-c288-dd11-92da-001cc4696bcc
Office: ACTION OES
Original Classification: UNCLASSIFIED
Original Handling Restrictions: n/a
Original Previous Classification: n/a
Original Previous Handling Restrictions: n/a
Page Count: 2
Previous Channel Indicators: n/a
Previous Classification: n/a
Previous Handling Restrictions: n/a
Reference: n/a
Retention: 0
Review Action: RELEASED, APPROVED
Review Content Flags:
Review Date: 29 mar 2005
Review Event:
Review Exemptions: n/a
Review Media Identifier:
Review Release Date: n/a
Review Release Event: n/a
Review Transfer Date:
Review Withdrawn Fields: n/a
SAS ID: 3317823
Secure: OPEN
Status: NATIVE
Subject: ELECTRON BEAM LITHOGRAPHY FOR VLSI'S
TAGS: TECH, EQUIP, JA
To: STATE
Type: TE
vdkgvwkey: odbc://SAS/SAS.dbo.SAS_Docs/9c374bc6-c288-dd11-92da-001cc4696bcc
Review Markings:
Sheryl P. Walter
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